



A.D. 1870, 12th FEBRUARY. N^o 421.

S P E C I F I C A T I O N

OF

JOHN BOTTERILL

AND

JOHN BOTTERILL, THE YOUNGER.

CONSUMING SMOKE & ECONOMIZING FUEL.

LONDON:

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,

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26, SOUTHAMPTON BUILDINGS, HOLBORN.

1870,



A.D. 1870, 12th FEBRUARY. N° 421.

Consuming Smoke and Economizing Fuel.

(This Invention received Provisional Protection only.)

PROVISIONAL SPECIFICATION left by John Botterill and John Botterill, the younger, at the Office of the Commissioners of Patents, with their Petition, on the 12th February 1870.

We, JOHN BOTTERILL and JOHN BOTTERILL, the younger, both of
5 Leeds, in the County of York, Dyers and Chemists, do hereby declare the nature of the said Invention for “AN IMPROVED METHOD OF CONSUMING SMOKE AND ECONOMIZING FUEL IN STEAM BOILER AND OTHER FURNACES,” to be as follows :—

The object of this Invention is to prevent the evolution of smoke from
10 the flues of steam boiler furnaces and effect an economy of fuel therein by causing the smoke and unconsumed combustible gases arising from the fuel to be brought in contact with red hot or highly heated surfaces heated by a small supplementary fire.

In carrying out our Invention in connection with a waggon or Cornish
15 boiler we cause the smoke and gases after passing to the extreme end of the boiler to return back along the sides and then pass down into a flue beneath, in which is constructed an arch or plate of iron or fire-brick which is kept in a highly heated state by a fire beneath. The flame from this fire after heating the iron or brick arch is deflected upwards

J. & J. Botterill's Method of Consuming Smoke, Economizing Fuel, &c.

by a bridge and made to commingle with such gases from the furnace as have passed unconsumed into the long flue below the boiler. The effect of this will be that all these gases will be completely consumed and a very considerable economy of fuel, or we would rather say a more advantageous and economical use of the fuel will be the result.

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